

REMARKS

The Final Office Action mailed November 19, 2009 considered and rejected claims 1, 2, 4-7, 9-14, 17-28, 30, 32, and 33. Claims 1, 2, 4-7, 9-14, 17-28, 30, 32, and 33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 2002/0059204) hereinafter *Harris* in view of Liddy et al. (US 6,006,221) hereinafter *Liddy* in view of Park et al. (US 6,064,951) hereinafter *Park*.¹

By this amendment, claims 1, 12, 13, 17, 18, and 22 are amended.² Claims 11 and 14 are cancelled. Accordingly, claims 1, 2, 4, 5-7, 9-10, 12-13, 17-28, 30, 32, and 33 are pending, of which claims 1, 22, and 28 are the independent claims at issue.

The invention is generally directed to multilingual database interactions. Claim 22, for example, recites a method for querying data stored in a data store in a base system language and that is queryable using a specified query format. Claim 22 recites receiving a language selection at a multidimensional database. The language selection specifies a language form among one or more other different languages, the language selection being an indication that queries are to be entered and data presented in the specified language. The base system language and the one or more other different languages each correspond to a language that humans use to verbally transfer information to one another.

A query is received. The query is in the specified language and in a query format other than the specified query format. The received query is converted into the specified query format in the base system language. Query conversion includes converting the received query from the specified language into the base system language. Query conversion also includes converting the received query in the base system language into the specified query format in accordance with query definition rules that specify query syntax and semantic information for the specified query format subsequent to converting the received user query into the base system language. The converted query is submitted to the data store.

A query response is received. The query response contains stored data in the base system

¹ Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

² Support for the amendments to the claims is found throughout the specification and previously presented claims of U.S. Pat. Publ. No. 2005/0177358, including but not limited to paragraphs [0013] and [0032]-[0042] and Figures 1-6.

language. The stored data is responsive to the converted query from the data store, the stored data in the base system language. The stored data is translated from the base system language to the specified language. Translation includes referring to a language specific translation table to statically translate portions of the stored data. Translation also includes referring to a unit conversion component to convert units of measurement in the base language system to units of measurement in the specified language. Translation also includes for any portions of the stored data for which static translation is insufficient, dynamically translating the portions of the stored data through reference to an inference component. Translation also includes utilizing context information to provide an accurate translation that conforms to proper punctuation, syntax, and semantics of the selected language. The stored data is provided to an interface in the specified language.

Claim 28 is a computer readable medium corresponding to the method claim 22.

Claim 1 is a system claim similar to claim 22.

Applicants respectfully submit that the cited art of record does not anticipate or otherwise render the amended claims unpatentable for at least the reason that the cited art does not disclose, suggest, or enable each and every element of these claims.

Harris describes distributing a query to devices on a communications network using an application that can survey a subscriber's server that can include text documents and databases, and use the formatting information and data from the survey to create at least one dictionary customized to the subscriber's data sources. A user seeking information can initiate a search or query from an initiating device using keywords, natural language terms, connectors, expressions, etc., and the query can be transmitted to various subscriber customized dictionaries. The customized dictionaries can customize the query based on respective subscriber databases and text documents, text search engines, etc., to produce an customized query result. The query results can be filtered and integrated for presentation to the initiating device. Search results can be customized using user preference or profile information.

Liddy describes a multilingual document retrieval system. Documents in a database are subjected to a set of processing steps to generate a language-independent conceptual representation of the subject content of the document. Likewise, received queries are processed to generate a language-independent conceptual representation of the subject content of queries. Documents and queries are matched based on the conceptual-level contents.

Park discloses a query transformation system and method capable of not only solving an ambiguousness of words involved in the transformation of queries from one language to another language, but also executing its processing independently of the processing of an information retrieval system used, so that it can be applied to a variety of information retrieval systems, thereby enabling the information retrieval system used to function as a multilingual information retrieval system. The system includes a translation generator for generating all possible translations of an input query consisting of a source language by reference to a translation dictionary, a semantic category verifier for receiving the generated translations from the translation generator, and eliminating translations having a low semantic similarity from the received translations, based on a semantic category tree, and a collocation information verifier for receiving the translations, which includes no translation having a low semantic similarity, from the semantic category verifier, and eliminating translations having no collocation from the received translations, based on word collocation information.

However, the cited art does not teach a multidimensional database as now recited in the independent claims. In rejecting former claim 14 in view of *Liddy*, the Office Action cited column 2, lines 46-48 to show a multidimensional database. However, this portion of *Liddy* only discusses a "database that includes documents in at least one other language of a plurality of languages." Applicants respectfully note that a multilingual database is not the same thing as a multidimensional database. A multilingual database can be any database that includes documents of different languages. Thus, a non-multidimensional database may be a multilingual database. A multidimensional database, however, has a specific meaning as discussed at least at paragraph 13 of the pending application.

Applicants further note that none of the cited art teaches or even mentions a multidimensional database. Thus, the cited art fails to at least teach this element of the claims.

The cited art also fails to teach or suggest a conversion unit that is configured to convert units of measurement from the base language system to the specified language.

In relation to claim 1, the Office Action alleges that dictionary 18 of *Harris* is both the translation component and the query conversion component. However, claim 1 now requires that these components be different from one another.

Accordingly, the cited are fails to teach or suggest, either singly or in combination:

...

receiving at a multidimensional database a language selection, the language selection specifying a language from among one or more other different languages, the language selection being an indication that queries are to be entered and data presented in the specified language, the specified language corresponding to a language that humans use to verbally exchange information;

...

translating the stored data from the base system language to the specified language, including:

referring to a language specific translation table to statically translate portions of the stored data; and

referring to a unit conversion component to convert units of measurement in the base language system to units of measurement in the specified language; and

for any portions of the stored data for which static translation is insufficient, dynamically translating the portions of the stored data through reference to an inference component; and

utilizing context information to provide an accurate translation that conforms to proper punctuation, syntax, and semantics of the selected language; and providing the stored data in the specified language to an interface.

as recited in claim 22, when viewed in combination with the other limitations of claim 22. For at least this reason, claim 22 patentably defines over the art of record. For at least the same reason, claim 28 also patentably defines over the art of record. For at least the same reason depend claims 23-27 also patentably define over the art of record.

In addition, the cited are fails to teach or suggest, either singly or in combination:

...

A multidimensional database that stores analytical data;

...

a query engine configured to receive a converted query from the translation component, submit the converted query to the multidimensional database, receive a query response

containing stored data responsive to the converted query from the multidimensional database, the stored data in the base system language, and pass query response data back to the translation component;

...

wherein the translation component further includes a unit conversion component configured to convert units of measurement from the base system language into units of measurement of the one or more other determined languages;

...

as recited in claim 1, when viewed in combination with the other limitations of claim 1. As such, claim 1 patentably defines over the art record. Claims 2, 4-7, 9-10, 12-13, and 17-21 patentably define over the art of record at least for the same reason as claim 1.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required reason why one of ordinary skill in the art would have modified the cited references in the manner officially noticed.

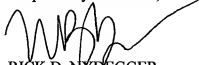
In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not

otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this 19th day of May, 2010.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. Nydegger', with a long horizontal flourish extending to the right.

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